

CLAIMS

1. An energy ray detecting element, comprising:

a semiconductor substrate having an energy ray sensitive region that generates charges in response to the incidence of energy rays;

5 an output section accumulating the charges generated in said energy ray sensitive region, and outputting a current signal or a voltage signal corresponding to the accumulated charge amount;

a plurality of electrodes, each positioned so as to cover a part of said energy ray sensitive region and transferring the charges generated
10 in said energy ray sensitive region to said output section; and

a voltage dividing circuit electrically connected to each of said electrodes, said voltage dividing circuit including a plurality of voltage dividing resistors serially connected to each other, each of said voltage dividing resistors providing a corresponding DC output potential to the
15 associated one of said electrodes by dividing a DC output voltage from a DC power supply.

2. An energy ray detecting element, comprising:

a semiconductor substrate having an energy ray sensitive region that generates charges in response to the incidence of energy rays;

20 an output section accumulating the charges generated in said energy ray sensitive region, and outputting a current signal or a voltage signal corresponding to the accumulated charge amount;

a plurality of electrodes, each positioned so as to cover a part of said energy ray sensitive region and transferring the charges generated
25 in said energy ray sensitive region to said output section; and

a voltage dividing circuit including a plurality of voltage

dividing resistors that are electrically connected to said electrodes respectively and are serially connected to each other, said voltage dividing circuit providing predetermined potentials to said electrodes respectively such that the potential wells, which are respectively formed below said electrodes, become gradually deeper in a charge transferring direction.

3. An energy ray detecting element according to claim 1 or 2, wherein said output section includes:

an impurity region accumulating the charges generated in said energy ray sensitive region; and

a gate inhibiting or allowing the movement of charges into said impurity region in accordance with a signal input.